

## STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE					

## SECTION II. BASIC DISCHARGE DESCRIPTION

NM 0020389

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. **SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY.** All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

## 1. Discharge Serial No. and Name

- a. Discharge Serial No.  
(see instructions)

201a 001

- b. Discharge Name  
Give name of discharge, if any.  
(see instructions)

201b Discharge from uranium recovery plant

- c. Previous Discharge Serial No.  
If previous permit application  
was made for this discharge (see  
Item 4, Section I), provide previ-  
ous discharge serial number.

201c N.A.

## 2. Discharge Operating Dates

- a. Discharge Began Date If the  
discharge described below is in  
operation, give the date (within  
best estimate) the discharge  
began.

202a 69 10  
YR MO

- b. Discharge to Begin Date If the  
discharge has never occurred but  
is planned for some future date,  
give the date (within best esti-  
mate) the discharge will begin.

202b N.A.  
YR MO

- c. Discharge to End Date If dis-  
charge is scheduled to be discon-  
tinued within the next 5 years,  
give the date (within best esti-  
mate) the discharge will end.

202c N.A.  
YR MO

## 3. Engineering Report Available

Check if an engineering report is  
available to reviewing agency upon  
request. (see instructions)

203 ☒4. Discharge Location Name the  
political boundaries within which  
the point of discharge is located.

State

204a New Mexico

County

204b McKinley

(if applicable) City or Town

204c N.A.

Agency Use

204d

204e

204f

## 5. Discharge Point Description

Discharge is into (check one):  
(see instructions)

Stream (includes ditches, arroyos,  
and other intermittent watercourses)

205a ☒ STR

Lake

☐ LKE

Ocean

☐ OCE

Municipal Sanitary Wastewater  
Transport System

☐ MTS

Municipal Combined Sanitary and  
Storm Transport System

☐ MCS

001

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Municipal Storm Water Transport System

Well (Injection)

Other

If 'other' is checked, specify

☐ STS☐ WEL☒ OTHSome water piped back to mines

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

206a

35 DEG 24 MIN 15 SEC

206b

107 DEG 50 MIN 21 SEC

7. Discharge Receiving Water Name Name the waterway at the point of discharge.(see instructions)

207a

Arroyo del Puerto

If the discharge is through an outfall that extends beyond the shore-line or is below the mean low water line, complete Item 8.

8. Offshore Discharge

a. Discharge Distance from Shore

208a

N.A. feet

b. Discharge Depth Below Water Surface

208b

N.A. feet

9. Discharge Type and Occurrence

a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)

209a

☒ (con) Continuous☐ (int) Intermittent

b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.

209b

7 days per week

c. Discharge Occurrence —Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

209c

☒ JAN ☒ FEB ☒ MAR ☒ APR☒ MAY ☒ JUN ☒ JUL ☒ AUG☒ SEP ☒ OCT ☒ NOV ☒ DEC

Complete Items 10 and 11 if "Intermittent" is checked in Item 9.a. Otherwise, proceed to Item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

210

N.A. thousand gallons per discharge occurrence.

11. Intermittent Discharge Duration and Frequency

a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.

211a

N.A. hours per day

b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

211b

N.A. discharge occurrences per day

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

212

From Jan. to Dec.  
month month

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OMB No. 158-R0100

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13. **Activity Description** Give a narrative description of activity producing this discharge.(see instructions)

213a

Mine water is pumped to a uranium recovery plant, after removal of about 94% of uranium some of the water is recirculated to the mines; the excess water is discharged. The plant uses an Ion Exchange system where chloride ions are exchanged for uranium ions.

14. **Activity Causing Discharge** For each SIC Code which describes the activity causing this discharge, supply the type and maximum amount of either the raw material consumed (Item 14a) or the product produced (Item 14b) in the units specified in Table I of the Instruction Booklet. For SIC Codes not listed in Table I, use raw material or production units normally used for measuring production.(see instructions)

## a. Raw Materials

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)
1094	Mine Water	2,132,000	Gallons/Day	None

## b. Products

SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
(1)	(2)	(3)	(4)	(5)
1094	Uranium Oxide	650	Pounds/Day	None



001

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**16. Wastewater Characteristics**

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate.(see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080		Copper 01042	
Ammonia 00610		Iron 01045	
Organic nitrogen 00605		Lead 01051	
Nitrate 00620		Magnesium 00927	
Nitrite 00615		Manganese 01055	
Phosphorus 00665		Mercury 71900	
Sulfate 00945		Molybdenum 01062	
Sulfide 00745		Nickel 01067	
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940	X	Potassium 00937	
Cyanide 00720		Sodium 00929	
Fluoride 00951		Thallium 01059	
Aluminum 01105		Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	
Calcium 00916		Phenols 32730	
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	
Fecal coliform bacteria 74055		Radioactivity* 74050	X

\*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

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**17. Description of Intake and Discharge**

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16; ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day 00056	2,132	NA	2,132	1,700	2880	Uranium Cont.	208	NA
pH Units 00400	8.3	NA		-	-	-		G
Temperature (winter) ° F 74028	48	NA	48	-	-	-		G
Temperature (summer) ° F 74027	56	NA	56	-	-	-		G
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	Unknown	NA	-	-	-	-		-
Chemical Oxygen Demand (COD) mg/l 00340	Unknown	NA	-	-	-	-		-
Total Suspended (nonfilterable) Solids mg/l 00530	Less than 10	NA	Less than					
Specific Conductance micromhos/cm at 25° C 00095	Unknown	NA		-	-	-		-
Settleable Matter (residue) ml/l 00545	Unknown	NA	-	-	-	-		-

\*Other discharges sharing intake flow (serial numbers). (see instructions)

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17. (Cont'd.)

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Uranium Mg/l	25	N.A.	1.5	0.4	2.2	Cont	208	NA

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete Item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

☐ APS

☐ ALM

N.A.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

b. Name and address of manufacturer

c. Quantity (pounds added per million gallons of water treated).

218

219a

219b

219c

001

FOR AGENCY USE

- d. Chemical composition of these additives (see instructions).

218d

Complete items 20-25 if there is a thermal discharge (e.g., associated with a steam and/or power generation plant, steel mill, petroleum refinery, or any other manufacturing process) and the total discharge flow is 10 million gallons per day or more. (see instructions)

20. Thermal Discharge Source Check the appropriate item(s) indicating the source of the discharge. (see instructions)

Boiler Blowdown

Boiler Chemical Cleaning

Ash Pond Overflow

Boiler Water Treatment — Evaporator Blowdown

Oil or Coal Fired Plants — Effluent from Air Pollution Control Devices

Condense Cooling Water

Cooling Tower Blowdown

Manufacturing Process

Other

☐ BLBD☐ BCCL☐ APOF☐ EPBD☐ OCFP

N.A.

☐ COND☐ CTBD☐ MFPR☐ OTHR

21. Discharge/Receiving Water Temperature Difference

Give the maximum temperature difference between the discharge and receiving waters for summer and winter operating conditions. (see instructions)

Summer

221a

\_\_\_\_\_ °F.

N.A.

Winter

221b

\_\_\_\_\_ °F.

22. Discharge Temperature, Rate of Change Per Hour

Give the maximum possible rate of temperature change per hour of discharge under operating conditions. (see instructions)

222

\_\_\_\_\_ °F./hour

N.A.

23. Water Temperature, Percentile Report (Frequency of Occurrence)

In the table below, enter the temperature which is exceeded 10% of the year, 5% of the year, 1% of the year and not at all (maximum yearly temperature). (see instructions)

Frequency of occurrence

N.A.

- a. Intake Water Temperature (Subject to natural changes)

223a

- b. Discharge Water Temperature

223b

10%	5%	1%	Maximum
_____ °F	_____ °F	_____ °F	_____ °F
_____ °F	_____ °F	_____ °F	_____ °F

24. Water Intake Velocity (see instructions)

224

\_\_\_\_\_ feet/sec.

N.A.

25. Retention Time Give the length of time, in minutes, from start of water temperature rise to discharge of cooling water. (see instructions)

225

\_\_\_\_\_ minutes

N.A.



[illegible]



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# STANDARD FORM C – MANUFACTURING AND COMMERCIAL

N M 0020389

## SECTION III. WASTE ABATEMENT REQUIREMENTS & IMPLEMENTATION (CONSTRUCTION) SCHEDULE

This section requires information on any uncompleted implementation schedule which may have been imposed for construction of waste abatement facilities. Such requirements and implementation schedules may have been established by local, State, or Federal agencies or by court action. In addition to completing the following items, a copy of an official implementation schedule should be attached to this application. IF YOU ARE SUBJECT TO SEVERAL DIFFERENT IMPLEMENTATION SCHEDULES, EITHER BECAUSE OF DIFFERENT LEVELS OF AUTHORITY IMPOSING DIFFERENT SCHEDULES (Item 1a.) AND/OR STAGED CONSTRUCTION OF SEPARATE OPERATION UNITS (Item 1c), SUBMIT A SEPARATE SECTION III FOR EACH ONE.

### 1. Improvements

a. **Discharge Serial Number**  
Affected List the discharge serial numbers, assigned in Section II, that are covered by this implementation schedule.

b. **Authority Imposing Requirements** Check the appropriate item indicating the authority for implementation schedule. If the identical implementation schedule has been ordered by more than one authority, check the appropriate items. (see instructions)

- Locally developed plan
- Areawide Plan
- Basic Plan
- State approved implementation schedule
- Federal approved water quality standards implementation plan.
- Federal enforcement procedure or action
- State court order
- Federal court order

c. **Facility Requirement.** Specify the 3-character code of those listed below that best describes in general terms the requirement of the implementation schedule and the applicable six-character abatement code(s) from Table II of the Instruction booklet. If more than one schedule applies to the facility because of a staged construction schedule, state the stage of construction being described here with the appropriate general action code. Submit a separate Section III for each stage of construction planned.

<b>300</b>	
<b>301a</b>	N.A.
<b>301b</b>	<input type="checkbox"/> LOC <input type="checkbox"/> ARE <input type="checkbox"/> BAS <input type="checkbox"/> SQS <input type="checkbox"/> WQS <input type="checkbox"/> ENF <input type="checkbox"/> CRT <input type="checkbox"/> FED
	3-character (general)
<b>301c</b>	N.A.
<b>301d</b>	6-character (specific) (see Table II)

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SCHED. NO.	

New Facility  
Modification (no increase in capacity or treatment)  
Increase in Capacity  
Increase in Treatment Level  
Both increase in Treatment Level and Capacity  
Process Change  
Elimination of Discharge

NEW  
MOD  
INC  
INT  
ICT  
PRO  
ELI

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**2. Implementation Schedule and 3. Actual Completion Dates**

Provide dates imposed by schedule and any actual dates of completion for implementation steps listed below. Indicate dates as accurately as possible. (see instructions)

Implementation Steps	2. Schedule (Yr./Mo./Day)		3. Actual Completion (Yr./Mo./Day)	
a. Preliminary plan complete	302a	____/____/____	303a	____/____/____
b. Final plan submission	302b	____/____/____	303b	____/____/____
c. Final plan complete	302c	____/____/____	303c	____/____/____
d. Financing complete & contract awarded	302d	____/____/____	303d	____/____/____
e. Site acquired	302e	____/____/____	303e	____/____/____
f. Begin action (e.g., construction)	302f	____/____/____	303f	____/____/____
g. End action (e.g., construction)	302g	____/____/____	303g	____/____/____
h. Discharge Began	302h	____/____/____	303h	____/____/____
i. Operational level attained	302i	____/____/____	303i	____/____/____

Not Applicable

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
APPLICATION FOR PERMIT TO DISCHARGE  
ADDITIONAL REQUIRED INFORMATION

N M 0020389

APPLICATION NUMBER									

DISCHARGE SERIAL NUMBER \_\_\_\_\_

REFER TO DIRECTIONS ON REVERSE SIDE BEFORE ATTEMPTING TO COMPLETE THIS FORM

Parameter (Code) (501)	Influent		Effluent					
	Untreated Intake Water (Daily Average)	In-Plant Treated Intake Water (Daily Average)	Daily Average	Minimum Value	Maximum Value	Frequency of Analysis	Number of Analyses	Sample Type
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Molybdenum Mg/l	0.74	-	0.74	-	-	Single	1	G
Total Uranium Mg/l	25	-	1.5	0.4	2.2	Cont	208	NA
Radium 226 (by Radon emanation method)								
Gross $\alpha$		See Below						
Gross $\beta$								

REMARKS: Activity of Radium

-8  
Micro curies per Ml  $0.82 \times 10^{-8} = 8.2 \mu\text{Ci/l}$   
Discharge water from uranium recovery plant, single analysis from a  
24 hour sample January 18, 1974

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete and accurate.

June 27, 1974	Paul M. Price	<i>Paul M. Price</i>
Date Form Completed	Name of Authorized Agent	Signature

**Directions.**—For each parameter listed, complete the information requested in each column in the units specified according to the instructions given below.

**Column 1.**—Enter the daily average value of the intake water at the point it enters the facility. If intake water is from more than one source, and enters the facility at separate entry points, the value given in column 1 should be weighted proportional to the quantity of flow contributed from each source. If water is treated before use, completion of this column is not required (see instructions for column 2). Values of intake are not required for mining activities.

**Column 2.**—If all or part of intake water is treated before use, provide values for total intake here instead of in Column 1. Also describe briefly in item 26 "additional information," the type of treatment performed on intake water (e.g., rapid sand filtration, coagulation, flocculation, ion exchange, etc.) and the percent of intake water contributing to this discharge that has been treated.

**Column 3.**—Supply daily average value for the days when discharge is actually operating or is expected to be operating (a new discharge). Daily average values are to be computed by weighting the daily value in proportion to the daily flow. If a discharge occurs irregularly, the value supplied in the column marked "Daily Average" should represent an average for the average for the days the discharge actually occurs. Average values are not to be supplied for pH, specific conductance, and bacteriological parameters (e.g., coliform bacteria).

**Columns 4 and 5.**—Supply minimum and maximum value observed (or expected for new discharge) over any one day when the discharge is operating.

**Column 6.**—Specify the average frequency of analysis for each parameter as number analyses per number of days (e.g., "3/7" is equivalent to three analyses performed every 7 days). If continuous, enter "CONT." When analyses are conducted on more than one individual grab sample collected during the same day, the analysis frequency should reflect one analysis whose value is the average of the individual grab sample measurements. Average frequency should be based on an operating month.

**Column 7.**—Specify the number of analyses performed at the average frequency specified in column 6, up to 365.

**Column 8.**—Specify sample type as follows:

G For grab sample (individual sample collected in less

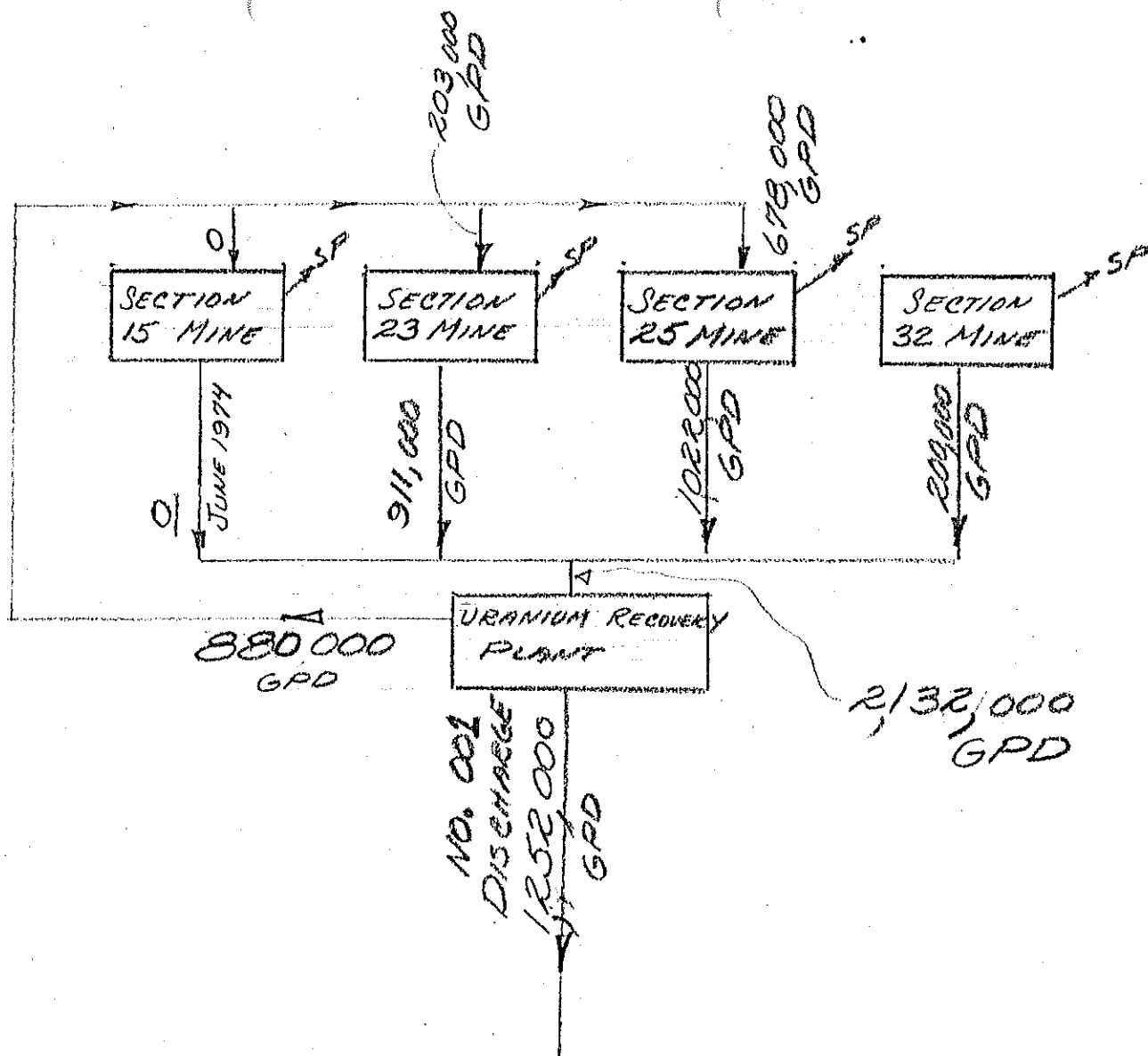
than 15 minutes).

#C For composite sample "#" is to be replaced by the average number of hours over which the composite sample was collected. Composite samples are combinations of individual samples obtained at intervals over a time period. Either the volume of each individual sample is directly proportional to discharge flow rates or the sampling interval (for constant-volume samples) is inversely proportional to the flow rates over the time period used to produce the composite.

NA If "CONT" was entered in column 6.

**Analytical methods.**—Appendix A contains all parameters with their reporting levels, test descriptions, and references. The parameter values can be determined either by use of one of the standard analytical methods as described in table A or by methods previously approved by the EPA Regional Administrator or Director of a federally approved State program (or their authorized representatives) which has jurisdiction over the State in which the discharge occurs. If the test used is not one shown in table A, the test procedure should be referenced in "Remarks" or on a separate sheet. If values are determined to be less than the detectable limit (as determined by referenced standard analytical techniques and/or instrument manufacturer's literature), specify "LT (value of detectable limit)" in the appropriate space. For example, if the detectable limit is .005 mg/l and quantities of less than this are determined, specify "LT .005." Do not enter descriptors such as "NIL," "TRACE," "NEG," etc., for this purpose. If it is your reasoned judgement that one or more of the required parameters is not present in the initial untreated or treated process water and/or the discharge, enter an "A" (meaning "absent") in the appropriate space.

In order for values reported to be representative, it is recommended that they be based on from at least five to seven analyses of composite samples (if applicable). Each of the composite samples should be obtained by compositing frequent samples in proportion to flow over an operating day. Samples should be taken during period of maximum production, if possible. If samples are taken at periods of less than maximum production, state in "Remarks" the percent of maximum production that was obtained during the sampling period.



## SCHEMATIC OF WATER FLOW

SOURCE OF ALL WATER IS FROM  
UNDERGROUND MINES  
(SP) SEPTIC TANK DISCHARGE 1000 GPD TOTAL  
UNITED NUCLEAR-HOMESTAKE PARTNERS  
P.O. Box 98, Grants, New Mexico  
JUNE 27, 1974





NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
APPLICATION FOR PERMIT TO DISCHARGE - SHORT FORM C

FOR  
AGENCY  
USE

APPLICATION NUMBER			
MM	0020	389	
DATE RECEIVED			
73	04	13	
YEAR	MO.	DAY	

To be filed only by persons engaged in manufacturing and mining

Do not attempt to complete this form before reading accompanying instructions  
Please print or type

1. Name, address, location, and telephone number of facility producing discharge

A. Name United Nuclear-Homestake Partners

B. Mailing address

1. Street address P. O. Box 98

2. City Grants

3. State New Mexico

4. County Valencia

5. ZIP 87020

C. Location:

1. Street Section 23, T. 14 N., R. 10 W., N.M.P.M.

2. City -

3. County McKinley

4. State New Mexico

D. Telephone No. 505 287-4456

Area  
Code

2. SIC 1094  
(Leave blank)

3. Number of employees 325

If all your waste is discharged into a publicly owned waste treatment facility and to the best of your knowledge you are not required to obtain a discharge permit, proceed to item 4. Otherwise proceed directly to item 5.

4. If you meet the condition stated above, check here ☐ and supply the information asked for below. After completing these items, please complete the date, title, and signature blocks below and return this form to the proper reviewing office without completing the remainder of the form.

A. Name of organization responsible for receiving waste -

B. Facility receiving waste:

1. Name -

2. Street address -

3. City -

4. County -

5. State -

6. ZIP -

5. ☐ Principal product, ☒ raw material (Check one) Uranium Ore

6. Principal process Concentration of Uranium Oxide

7. Maximum amount of principal product produced or raw material consumed per (Check one)

Basis	Amount							
	1-99	100-199	200-499	500-999	1000-4999	5000-9999	10,000-49,999	50,000 or more
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Day								
B. Month								
C. Year								X

